



# Standard Operating Procedures Case Study: Minnesota

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Homeland  
Security

# Standard Operating Procedures

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### Background

At 6:01 p.m. on August 1, 2007, the I-35W bridge over the Mississippi River in Minneapolis, used daily by 140,000 vehicles, collapsed. When officers arrived, they found the entire span of I-35W crumpled into the river below, injured people, burning vehicles, a school bus carrying 60 children on the broken roadway, submerged vehicles, and people scrambling up the riverbanks.

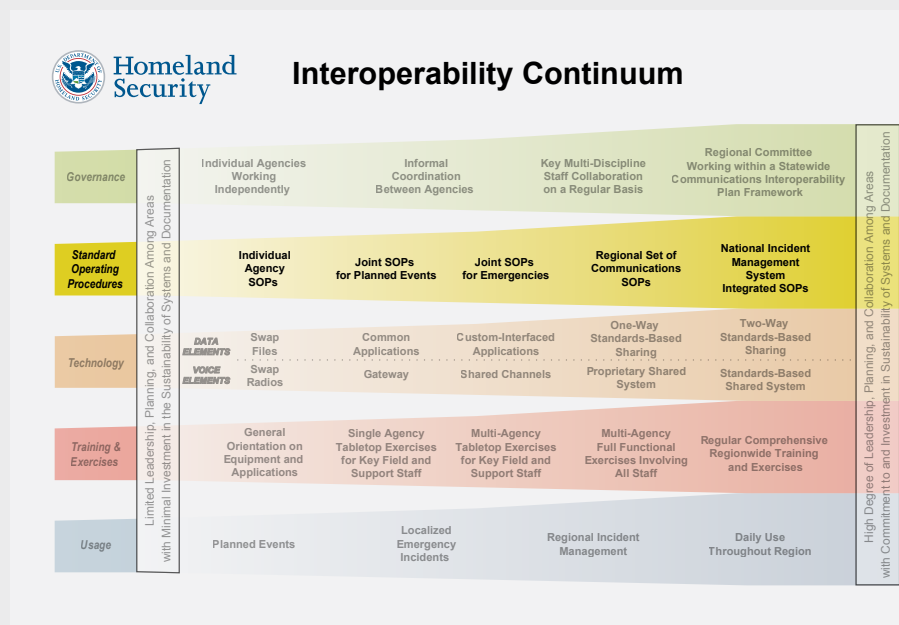
Immediately after the bridge collapsed, first responders requested mutual aid from nine counties in the Minneapolis-St. Paul (Twin Cities) metropolitan area to support response efforts at the scene and to provide backup services throughout the region. The comprehensive response effort, including the effective combination of people, procedures, and technology, went exceedingly well and involved more than 170 agencies and an initial response from a

myriad of emergency response units—ranging from sheriff offices and fire departments to park police departments and medical center ambulance services (according to the Minnesota Department of Public Safety Performance Review: ARMER Radio System at I-35W Bridge Collapse). During the incident, emergency responders exchanged more than 114,397 radio transmissions—20,000 within the first hour alone – double the normal load.

After action reports indicated that though responders needed to become more proficient in some areas, such as with the use of Minnesota's Incident Command System, no major adjustments were needed to the SOPs used during the response. In fact, by having effective and fully aligned SOPs in place prior to the event, the region maintained order throughout the incident.

### Standard Operating Procedures

The SAFECOM Interoperability Continuum (Continuum) is designed to assist emergency response agencies and policymakers to plan and implement interoperability solutions for data and voice communications. This tool identifies five critical success elements that must be addressed to achieve a sophisticated interoperability solution. The second critical success element is standard operating procedures (SOPs). SOPs are formal written guidelines or instructions for incident response and typically have both operational and technical components. In order to achieve the most sophisticated level of interoperability in the SOP lane, a regional set of communications SOPs must be molded to conform to the elements of the National Incident Management System (NIMS).



## Advancing Toward Interoperability

The core tenet of the Continuum is that interoperability cannot be established merely through competency in any one lane of the Continuum; sophistication relies on capabilities in each of the lanes. Aligning with this tenet can be challenging for emergency response agencies, especially when trying to take a successful city, county, or regional interoperability solution and effectively replicate it across the State for use in daily operations and emergency incidents. In Minnesota, the Twin Cities spent much of the last decade refining and implementing a radio system and related SOPs for regular use. The radio system, known as the Allied Radio Matrix for Emergency Response (ARMER), was first implemented in 2001 to overlay the nine-county Twin Cities metropolitan area. ARMER is an advanced, digitally trunked radio system that operates in the 700 and 800 MHz spectrum and, as reflected by the Continuum, provides the most comprehensive technical level of interoperability as a standards-based shared system. In addition, the Twin Cities SOPs align to the NIMS, which lays the groundwork for efficient and effective responses by putting into place procedures and protocols governing response prior to an incident.

For many jurisdictions, adopting and using SOPs that are consistent with NIMS is the ultimate goal, as NIMS is the Nation's first standardized management approach that unifies Federal, State, and local responders. The Twin Cities had been NIMS-compliant well before a 2005 Governor's Executive Order established NIMS as Minnesota's only recognized system for incident management and response. The Executive Order states, in part, "It is necessary and desirable that all Federal, State, local, and tribal emergency agencies and personnel coordinate their efforts to effectively and efficiently provide the highest levels of incident management."<sup>1</sup>

According to Tom Johnson, the Minnesota Statewide Interoperability Coordinator, "Well-documented and consistent standard operating procedures give our public safety responders the best opportunity to go home safe and sound at the end of their shift."

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*– Tom Johnson  
Statewide Interoperability Coordinator*

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## Statewide Adoption

Following thoughtful and thorough planning, the SOPs for ARMER proved successful for the Twin Cities area. State leaders recognized this success and decided to leverage the ARMER system and its corresponding SOPs to improve statewide emergency communications. In 2002, the State legislature voted to extend coverage of the metropolitan system to the rest of the State. The ARMER backbone is currently in use by 20 of 87 counties on a daily basis. Importantly, 71 of 87 counties in the State have passed resolutions to migrate to the ARMER system by 2012, and 65 percent of the State's 328 towers are currently on the air. In addition, ARMER also can be used to link non-ARMER systems through shared radios, gateways, and a VHF overlay.

## State and Regional Radio Boards

To effectively establish statewide SOPs in Minnesota, the State implemented a collaborative and cooperative approach—with very positive results. This success can be traced back to the development of a sophisticated governance structure that manages the SOPs. To help oversee the expansion of the statewide system, the Minnesota legislature replaced the existing metropolitan area governance group with a multi-jurisdiction, multi-discipline Statewide Radio Board. The Statewide Radio Board has numerous statutory responsibilities, including managing statewide SOPs. A balanced geographic representation is maintained on the Statewide Radio Board with State and local membership—consisting of a variety of emergency response leaders of the Twin Cities and Greater Minnesota. To complement and reinforce this diversity, a robust structure of Regional Radio Boards was created.

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<sup>1</sup> Minnesota State Executive Order 05-02, "DESIGNATION OF THE NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) AS THE BASIS FOR ALL INCIDENT MANAGEMENT IN THE STATE OF MINNESOTA"

## Implementing SOPs in Minnesota

Ultimately, compliance with SOPs requires the adherence of all affected emergency response entities. Therefore, the Statewide Radio Board relies heavily on the Regional Radio Boards to help validate, promote, and resolve conflicting standards, protocols, and procedures throughout the State. Though the Statewide Radio Board is charged with setting standards and determining protocols and procedures, the seven Regional Radio Boards have responsibility for central collection and compliance oversight related to required Memoranda of Agreement, Memoranda of Understanding, and subscriber agreements.

The Regional Radio Boards also help ensure that SOPs are implemented and practiced at the agency user-level and as a part of tabletop and field training exercises. This proved critical during the bridge collapse; as Roger R. Laurence, Communications Manager in the Hennepin County Sheriff's Office, said, "The bottom line is that everything worked because we have accomplished the implementation of a mature regional shared system, by developing SOPs, pre-planning, and training incident commanders and end users on radio interoperability."

The application and use of SOPs are monitored and managed by the user agencies through their communications center and dispatch operations as well as through reports to their dispatch and communications centers from radio users in the field. Any issue with an individual SOP is first addressed on an agency-to-agency level. If a situation or application of an SOP requires higher-level review, consideration, or resolution, the particular item will be addressed by the Regional Radio Boards or Statewide Radio Board depending upon the issue. This process applies to all situations involving SOP issues, including compliance with NIMS.

To further support Statewide Radio Board and Regional Radio Boards structure, Minnesota's Department of Public Safety created a Statewide Public Safety Interoperability Program, which is staffed

by the Statewide Interoperability Coordinator and three regional interoperability coordinators. This program coordinates interoperability within the State, including facilitation and development of SOPs related to local, regional, and statewide interoperable communication. Moving forward, Minnesota seeks to ensure the entire State has this capability by 2012. Though some hard work remains to achieve this capability level, there is every indication that Minnesota will meet its goal now that every emergency response agency in the State has access to ARMER and is represented on Regional Radio Boards.

## Conclusion

The bridge collapse on August 1, 2007 could have easily proven to be an impossible scenario for the city, yet Twin Cities emergency responders relied on their training and SOPs to help make the "impossible" scenario end in a successful response. While Minnesota's solution is ever-evolving, the State's approach to SOPs is proven and repeatable. Leveraging Minnesota's lessons learned, other States and localities can improve response during all-hazards events. Regardless of whether other States follow Minnesota's SOPs or create their own, the development and establishment of multi-jurisdictional, multi-discipline SOPs prior to any level of event is vital to emergency response effectiveness. For examples of SOPs developed and shared by members of the emergency response community, please visit the Office of Emergency Communications' repository on the [National Interoperability Information eXchange](#).

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*This case study is a part of a series developed by the Office of Emergency Communications (OEC) to highlight advancements made by stakeholders in strengthening emergency communications capabilities. The case studies align to the Interoperability Continuum and detail milestones in the areas of governance, standard operating procedures, technology, training and exercises, and usage. Each study represents a unique solution from a State, region, city, or town across the Nation.*